

## Mechanical Systems Competency 4.10

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**Competency 4.10** Mechanical systems personnel shall demonstrate the ability to evaluate contractor activities and reports controlled by DOE Order 5000.3, Occurrence Reporting and Processing of Operations Information.

### 1. Supporting Knowledge and Skills

- a. Using an occurrence report and DOE Order 5000.3 as a reference, determine the following:
  - The adequacy of the review process used
  - Whether causes were appropriately defined
  - Whether corrective actions addressed causes
  - Whether the lessons learned were appropriate
  - Whether corrective actions have been completed
- b. Using an occurrence report involving mechanical systems activities, identify and discuss the factors contributing to the occurrence.

### 2. Self-Study Activities (corresponding to the intent of the above competency)

Below are two web sites containing many of the references you may need.

| Web Sites                     |   |  |
|-------------------------------|---|--|
| Organization                  | Site Location   | Notes                                  |
| Department of Energy          | <a href="http://wastenot.inel.gov/cted/stdguido.html">http://wastenot.inel.gov/cted/stdguido.html</a> | DOE Standards, Guides, and Orders      |
| U.S. House of Representatives | <a href="http://law.house.gov/cfr.htm">http://law.house.gov/cfr.htm</a>                               | Searchable Code of Federal Regulations |

**Read** DOE Order 5000.3B, *Occurrence Reporting and Processing of Operations Information*.

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**Read** two or more occurrence reports involving facilities at your site. If possible, these should involve mechanical system activities as at least a contributing factor.

EXERCISE 4.10-A Using an occurrence report and DOE Order 5000.3B as a reference, determine the following:

- That the review process used was adequate
- Whether causes were appropriately defined
- Whether corrective actions addressed causes
- Whether the lessons learned were appropriate
- Whether corrective actions have been completed

### 3. Summary

DOE Order 5000.3B, *Occurrence Reporting and Processing of Operations Information*, establishes a system for reporting of operations information related to DOE-owned or -operated facilities and processing of that information to provide for appropriate corrective action.

The Order describes the requirements for reporting and processing of occurrences related to the operation of DOE-owned or -operated facilities, including occurrences related to safety, health, security, property, operations, or the environment, up to and including emergencies.

### 4. Exercise Solutions

EXERCISE 4.10-A Using an occurrence report and DOE Order 5000.3B as a reference, determine the following:

- That the review process used was adequate
- Whether causes were appropriately defined
- Whether corrective actions addressed causes
- Whether the lessons learned were appropriate
- Whether corrective actions have been completed

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### ANSWER 4.10-A

| Issues                                 | Indicators  |
|--|---|
| Adequacy of the review process         | <ul style="list-style-type: none"><li>• Identification and categorization of occurrence were timely.</li><li>• Notification and reporting to DOE management were timely.</li><li>• Significance, root causes, generic implications, and the need for corrective actions were addressed.</li></ul>   |
| Causes were appropriately defined      | <ul style="list-style-type: none"><li>• At least one direct cause is identified.</li><li>• No more than three contributing causes are defined.</li><li>• Complete consideration of the cause is provided, including contributory factors, with analysis to show what cause was root to the occurrence and what causes were only contributory.</li><li>• One of the seven allowable categories of causes was identified.</li></ul> |
| Corrective actions addressed causes    | <ul style="list-style-type: none"><li>• The corrective actions are directly related to the causes (direct and contributing) defined.</li></ul>  |
| Lessons learned were appropriate       | <ul style="list-style-type: none"><li>• Includes only lessons that others might learn from the occurrence which might be important to other facility operators, or which should be addressed in personnel training or facility procedures.</li><li>• Lessons learned are directly related to the occurrence.</li></ul>  |
| Corrective actions have been completed | <ul style="list-style-type: none"><li>• All actions identified to correct the problem are listed, which completed, will prevent recurrence.</li><li>• Actual or target completion dates are provided for all the corrective actions listed.</li></ul>   |